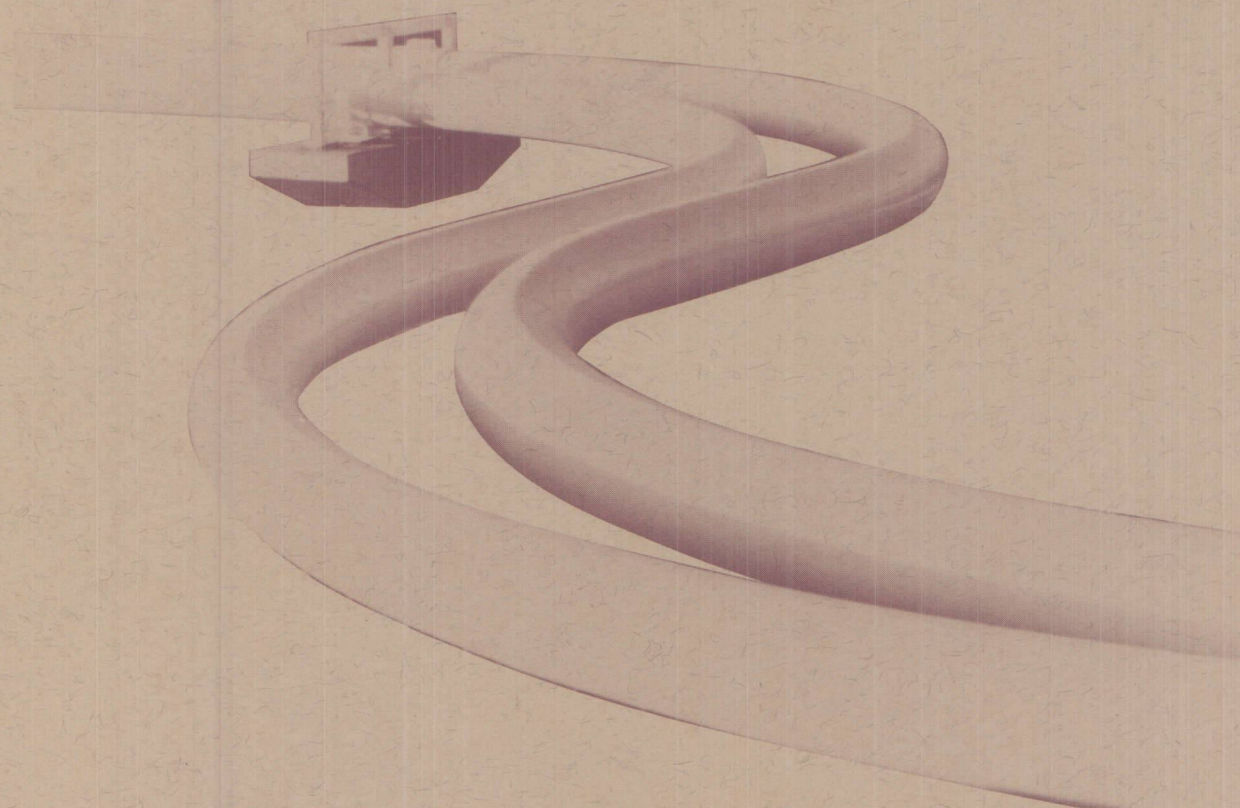




Energy Information Administration

Profiles of Foreign Direct Investment in U.S. Energy 1986



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Profiles of Foreign Direct Investment in U.S. Energy 1986

December 1987

Energy Information Administration
Office of Energy Markets and End Use
U. S. Department of Energy
Washington, DC 20585

Preface

In accordance with Section 657, Subpart 8, of the Department of Energy Organization Act, the Energy Information Administration (EIA) prepares an annual report for the Secretary of Energy and for transmittal to Congress. This report summarizes the activities in the United States by foreign-affiliated companies that own or control U.S. energy sources and supplies.

Presented in this 1986 report are profiles of foreign direct investment in U.S. petroleum (including natural gas production); foreign-affiliated companies' energy production, processing, distribution, and reserves; and foreign-affiliated energy companies' financial performance and investment activity in 1986. Additionally, profiles of U.S. companies' energy operations abroad and comparisons of foreign-affiliated companies to U.S. energy companies are presented. The information is intended for use by the Congress, Government agencies, energy industry analysts, international trade and finance analysts, and the public.

Profiles of Foreign Direct Investment in U.S. Energy 1986 was prepared, under the direction of Arthur T. Andersen (202) 586-1441, by the Economics and Statistics Division of the Office of Energy Markets and End Use, Energy Information Administration, U.S. Department of Energy.

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Contents

	Page
Preface	iii
Executive Summary	ix
1. Introduction	1
2. Foreign Direct Investment in U.S. Petroleum and Coal	3
Foreign Direct Investment and Rates of Return in in U.S. Petroleum	3
Sources of Foreign Direct Investment in U.S. Petroleum	8
Foreign Direct Investment and Rates of Return in U.S. Coal	12
3. Profiles of Foreign-Affiliated Companies' Roles in U.S. Energy Operations	13
Oil and Gas Reserves and Production	13
Refining and Gasoline Marketing	17
Coal Production	17
Uranium Exploration and Development	23
4. Financial Profiles and Transactions of Foreign-Affiliated U.S. Energy Companies	25
Financial Profiles	25
Foreign Direct Investment Transactions in U.S. Energy Markets	28
Appendix	
Completed Foreign Direct Investment Transactions, 1986	31

Tables

	Page
1. Foreign Direct Investment in U.S. Petroleum and U.S. Direct Investment in Foreign Petroleum, 1980-1986	6
2. Geographic Sources of Foreign Direct Investment in U.S. Petroleum, 1983-1986	8
3. OPEC Direct Investment in the United States, 1981-1986	10
4. Additions to Foreign Direct Investment in U.S. Petroleum, 1977-1986	11
5. Distributed and Reinvested Earnings for Foreign Direct Investment in U.S. Petroleum, 1981-1986	11
6. Foreign Direct Investment, Additions to Foreign Direct Investment, and Rate of Return on Foreign Direct Investment in U.S. Coal, 1980-1986	12
7. Domestic Oil and Dry Natural Gas Proved Reserves and Production for Foreign-Affiliated U.S. Companies, 1985 and 1986	14
8. Foreign Crude Oil and Natural Gas Liquids Reserve Interest for FRS Companies, 1985 and Percent Change from 1984	15
9. Net Production of Petroleum and Dry Natural Gas in the United States by Foreign-Affiliated U.S. Companies, 1984-1986	16
10. U.S. Refinery Operations of Foreign-Affiliated U.S. Companies, 1982-1986	18
11. Foreign Refinery Output and Capacity Statistics for FRS Companies and Foreign Industry, 1984 and 1985	19
12. Branded Retail Outlets and Total Gasoline Supplied by Foreign-Affiliated U.S. Companies, 1984-1986	20
13. Bituminous Coal and Lignite Production and Source of Ownership of Foreign-Affiliated Coal Companies in the United States, 1984-1986	21
14. Foreign Participation in U.S. Uranium Exploration and Development, 1976-1986	23
15. Annual Change in Net Income and Return on Stockholders' Equity, 1984-1986	26
16. Selected Financial Information for Foreign-Affiliated U.S. Energy Companies, 1985 and 1986	27

	Page
17. Distribution of the Value of Foreign Direct Investment Transactions by Industry, 1981-1986	29
18. Distribution of the Value of Foreign Direct Investment Transactions by Type of Transaction, 1981-1986	30
A1. Completed Transactions by Size in the Petroleum Industry from January 1986 through December 1986	33
A2. Completed Transactions by Size in the Coal Industry from January 1986 through December 1986	35
A3. Completed Transactions in the Uranium Industry from January 1986 through December 1986	35

Figures

1. Additions to Foreign Direct Investment in U.S. Petroleum and U.S. Direct Investment in Foreign Petroleum, 1978-1986	4
2. Rates of Return on Foreign Direct Investment in the United States, 1977-1986	7
3. Sources of Foreign Direct Investment in U.S. Petroleum by Geographic Area, 1980-1986	9
4. Production and Share of U.S. Total Bituminous Coal and Lignite of Foreign-Affiliated U.S. Companies, 1980-1986	22

Executive Summary

Profiles of Foreign Direct Investment in U.S. Energy 1986 outlines the role of foreign ownership in U.S. energy, with respect to investment, energy operations, and financial performance. Data from the Energy Information Administration (EIA), Department of Commerce, company annual reports, and public disclosures of investment transactions are all utilized.

Of the approximately 75 separate companies profiled, the major foreign-affiliated U.S. companies identified by the EIA are Shell Oil Company, Standard Oil Company, E.I. du Pont de Nemours and Company, and American Petrofina. Foreign ownership ranges from 23 percent of Du Pont to 100 percent of Shell Oil.

Highlights of the information in this report are given below:

- Sharply lower oil prices in 1986 led to a reduced interest from foreign direct investors in U.S. petroleum. The addition to the foreign direct investment position (FDI)¹ in U.S. petroleum² was only \$1.4 billion in 1986, the second-lowest level since 1978. By contrast, total additions to FDI in the United States equaled \$24.7 billion.
- The FDI position in U.S. petroleum, which totaled \$29.6 billion in 1986, slipped from 15.3 percent of total FDI in the United States in 1985 to 14.1 percent in 1986.
- Additions to FDI in U.S. coal had a value of \$222 million in 1986, down somewhat from \$234 million in 1985. The FDI position in U.S. coal stood at \$3.1 billion in 1986.
- In 1986, the value of petroleum FDI-related transactions was roughly balanced between the functional areas of oil and gas production, petroleum refining and marketing, and pipeline transport.
- In oil and gas production, major transactions included:
 - Shell Oil Company reported outlays of \$353 million in 1986 for the acquisition of producing properties in the United States. The acquisitions included Phillips Petroleum Company's interests in six California properties for \$225 million.

¹ Foreign Direct Investment (FDI) is the cumulative net flow of funds between a foreign-affiliated company and its foreign owners. The United States Department of Commerce, the agency that collects data on FDI, measures FDI as the book value of foreign direct investors' equity in, and net outstanding loans to, their U.S. affiliates. The Department of Commerce defines a U.S. affiliate as a U.S. business enterprise in which one foreign direct investors owns 10 percent or more of the voting securities or the equivalent.

² One of the components of FDI consists of equity and intercompany account capital flows between a foreign investor and its U.S. affiliate measured on a net basis. Since this component is measured on a net basis, it can have a negative value.

- In a joint venture with a U.S. partner, Lonrho PLC of London acquired U.S. oil and gas properties for \$180 million.
- Du Pont's Conoco unit formed a joint venture with Nippon Mining Company of Japan to undertake a \$135 million joint drilling venture involving about 20 exploratory wells in the United States.
- Minatome Corporation, a subsidiary of Total Compagnie Francaise des Petroles of France, acquired the exploration and production assets of Lear Petroleum Partners for \$115 million.
- The major FDI-related transaction in U.S. refining and marketing was the acquisition of a 50-percent interest in Citgo Petroleum Corporation (a subsidiary of Southland Corporation) by Petroleos de Venezuela, a national petroleum company of Venezuela. The \$540 million transaction included a \$250 million contribution to Citgo's working capital.
- In an unusual transaction involving a major natural gas transmission company, Sonatrach, the Algerian national oil and gas company, received \$200 million in cash and 6 million newly-issued common shares of Panhandle Eastern Corporation in a negotiated settlement resolving claims related to natural gas contracts. The shares issued to Sonatrach represent an equity interest of 11.4 percent. Panhandle Eastern reported a value of \$330 million for the shares.
- In U.S. coal operations, Du Pont's Consolidation Coal unit bought low-sulfur coal properties from Inland Steel Company for \$106 million and bought Sierra Coal Company (Kentucky), a unit of Broken Hill Proprietary Company, Ltd. (Australia), for \$49 million.

The sharp decline in oil prices in 1986 had a devastating effect on the financial performance of foreign-affiliated energy companies, leading to a fall in their return on equity from 6.1 percent in 1985 to minus 1.5 percent in 1986. Other U.S. energy companies' return on equity also registered a sharp decline, from 6.7 percent to 1.9 percent. Capital expenditures of foreign-affiliated companies fell nearly a third between 1985 and 1986 to \$8.7 billion.

Despite the fall in income and investment, the role of foreign affiliates in U.S. energy operations increased in nearly all areas in 1986.

Among energy operations, petroleum refining continued to evidence the largest growth in the role of foreign affiliates. The increase in foreign affiliates' share of U.S. refinery capacity, from 16.8 percent in 1985 to 19.1 percent in 1986, was primarily the result of Petroleos de Venezuela's acquisition of a 50-percent interest in Citgo Petroleum. As recently as 1984, foreign affiliates' share of U.S. refinery capacity was less than 15 percent.

Through the acquisition of proved oil and gas properties, the foreign affiliates' share of U.S. oil and gas production rose somewhat in 1986. Their share of U.S. oil production went from 13.7 percent in 1985 to 14.6 percent in 1986, and for natural gas production the increase was from 6.6 percent to 7.4 percent.

Foreign-affiliated companies with U.S. bituminous coal and lignite operations continued a gradual decline that began in 1985, following a sharp increase in their operations in the early 1980s. In 1986, their share of U.S. production fell to 16.4 percent. The slight downturn was caused by lower production levels among the majority of foreign affiliates, which contrasted with the slight increase in total U.S. coal production.

As reflected in patterns of spending for uranium exploration and development, foreign affiliates were of greatly increased importance in U.S. uranium operations. Foreign affiliates' exploration and development expenditures for uranium rose from \$5.3 million to \$11.3 million between 1985 and 1986, raising their share of the U.S. total from 26.1 percent to 51.2 percent.

1. Introduction

According to a Congressional report on foreign investment:³

"The Congress and the public have expressed serious concerns about the impact and effects of foreign investment in the United States. They are concerned about the possibility that, if the assets or the natural resources of large U.S. firms end up under foreign control, those firms could be operated in ways ultimately harmful to U.S. national interests. These concerns arise out of the reports of foreign takeovers of high technology U.S. firms, acquisitions of U.S. farmland, investment in U.S. banks and government securities, and large foreign purchases of U.S. energy and other natural resources with the concomitant export of these scarce resources. Some of these concerns may be unfounded, but it is self-evident that both the Congress and the public must be fully apprised of the impact and effects of foreign investment to make these judgments."

The above concerns extend specifically to involvement of foreign interests in U.S. energy as evidenced by Section 657, Subpart 8, of the Department of Energy Organization Act (Public Law 95-91). This act requires, inter alia, that the Secretary of Energy report to the President for transmittal to Congress:

"...to the extent practicable, a summary of activities in the United States by companies or persons which are foreign owned or controlled and which own or control United States energy sources and supplies, including the magnitude of annual foreign direct investment in the energy sector in the United States..."

The Energy Information Administration (EIA) annually prepares a report pursuant to the legislative requirement. Versions of the report, for years prior to the 1983 reporting year, have appeared as Appendix A in the U.S. Department of Energy's Secretary's Annual Report to Congress. Beginning with the 1983 reporting year, the annual report on foreign investment and ownership in U.S. energy has been made available by the EIA in published form. This makes the information contained in it available on as timely a basis as possible.

By definition,⁴ "a U.S. affiliate is a U.S. business enterprise in which a single foreign direct investor owns at least 10 percent of the voting securities, or the equivalent." It should be noted that holding 10 percent or more of a company's

³Energy Information Administration, Annual Energy Review 1986, DOE/EIA-0384(86) (Washington, DC, May 1987), p. 179.

⁴U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business (Washington, DC, June 1987). Also, it should be noted that, consistent with its definition, FDI activities portrayed throughout this report do not include any foreign investment activities in connection with less than 10 percent ownership, which is known as portfolio investment.

voting stock does not necessarily constitute control of that company. The determination of control is a complex and often subjective process in which many factors other than the percentage of ownership must be considered.

This report reviews the patterns of foreign ownership interest in U.S. energy enterprises, exclusive of portfolio investment. Throughout this report such foreign non-portfolio ownership interests in U.S. energy companies are referred to as "foreign direct investment" (FDI) and the U.S. affiliates in which a foreign entity holds an ownership interest are referred to as "foreign-affiliated" U.S. enterprises or companies.

The involvement of foreign-affiliated U.S. companies in domestic petroleum production, reserve holdings, refining and marketing activities, coal production, and uranium exploration and development is profiled in this report. A financial profile of U.S. energy companies that are foreign-affiliated is presented with comparisons of 1985 and 1986 results. Capital and income flows in petroleum between the foreign owners and the foreign-affiliated U.S. companies and the international composition of ownership are reported. In addition, recent acquisitions of ownership interests in U.S. energy companies by foreign persons are summarized.

2. Foreign Direct Investment in U.S. Petroleum and Coal

The information on foreign direct investment (FDI) in the United States is derived from published data from the U.S. Department of Commerce's quarterly reports required of foreign-affiliated U.S. enterprises. FDI is the cumulative net flow of funds between a foreign-affiliated company and its foreign owners. These capital flows consist of stock purchases and paid-in capital, retained earnings and other equity, and loans from and to the foreign parents.⁵ The change in FDI is not a measure of capital expenditures in the United States by foreign-affiliated U.S. companies. Foreign direct investment is a measure of the net flow of capital between the foreign entities and their U.S. affiliates. It should be emphasized that investment flows out of, as well as into, the United States. As is discussed in the next section, U.S. direct investment abroad generally exceeds FDI in the United States, although the difference has been declining in recent years.

For U.S. Department of Commerce reporting purposes, petroleum consists of crude oil production (including natural gas liquids), natural gas production, oil field services, integrated refining, marketing, and transport. Foreign-affiliated companies classified in integrated petroleum refining accounted for 75 percent of the FDI in U.S. petroleum in 1986. The major foreign-affiliated U.S. petroleum companies identified by the Energy Information Administration (EIA) are Shell Oil Company, Standard Oil Company, E.I du Pont de Nemours and Company, and American Petrofina. Foreign ownership ranges from 23 percent of Du Pont to 100 percent of Shell Oil.

Information on the role of foreign-affiliated companies in petroleum and other U.S. energy areas, based on EIA and other data sources, is presented in the next chapter.

Foreign Direct Investment and Rates of Return in U.S. Petroleum

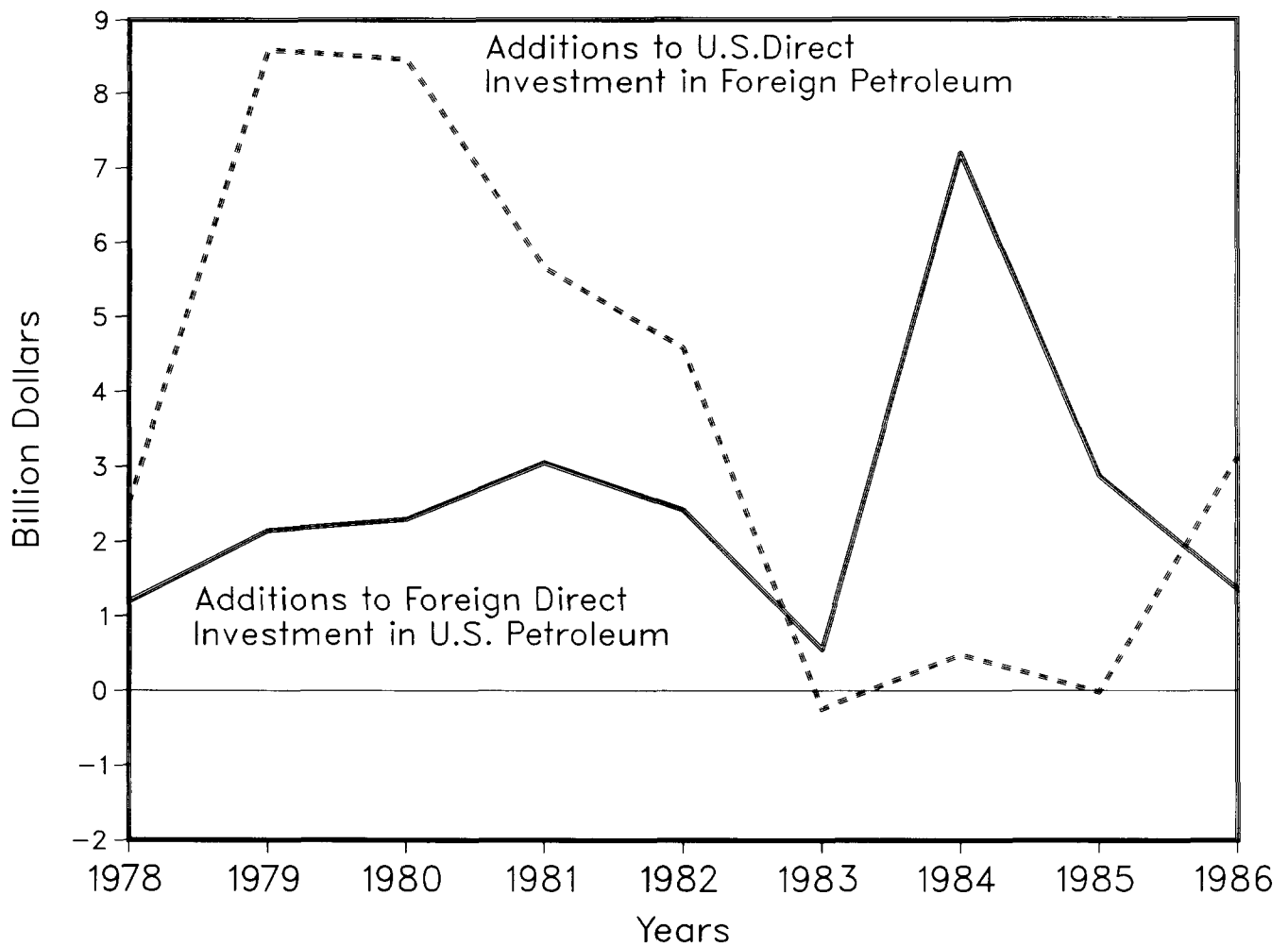
The additions to FDI in U.S. petroleum totaled \$1.4 billion in 1986, the second lowest level since 1978 (Figure 1). Even excluding the amounts expended by the Royal Dutch/Shell Group of Companies for the acquisition of 100-percent ownership of Shell Oil Company of \$4.5 billion in 1984 and \$1.2 billion in 1985, the level of additions to FDI in U.S. petroleum in 1986 was below that of the prior two years.

Major FDI-related transactions in U.S. petroleum included:

- Acquisition of a 50-percent interest in Citgo Petroleum Corporation by Petroleos de Venezuela for \$290 million plus a \$250 million contribution to Citgo Petroleum's working capital.

⁵ One of the components of FDI consists of equity and intercompany account capital flows between a foreign investor and its U.S. affiliate measured on a net basis. Since this component is measured on a net basis, it can have a negative value.

Figure 1. Additions to Foreign Direct Investment in U.S. Petroleum and U.S. Direct Investment in Foreign Petroleum, 1978-1986



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1985 and August 1987).

- In a settlement of natural gas contracts, Sonatrach, the Algerian national oil and gas company, received \$200 million in cash and 6 million newly-issued common shares of Panhandle Eastern Corporation. The shares represent an equity interest of 11.4 percent and were valued at \$330 million by Panhandle Eastern.
- Shell Oil Company acquired Phillips Petroleum Company's interest in six California properties for \$225 million. Shell Oil reported total outlays of \$353 million in 1986 for the acquisition of proved oil and gas properties in the United States.
- Lonrho PLC of London, in a joint venture, acquired U.S. oil and gas properties from Atlantic Richfield for \$180 million.
- Du Pont's Conoco unit formed a joint venture with Nippon Mining Company to undertake a \$135 million drilling venture involving about 20 wells in the United States.
- Minatome Corporation, a subsidiary of Total Compagnie Francaise des Petroles, acquired the exploration and production assets of Lear Petroleum Partners for \$115 million.

The reduction in additions to FDI in U.S. petroleum was a reflection of the unprecedented decline in oil prices in 1986. By most measures, U.S. crude oil prices fell by more than \$11 per barrel, or by over 40 percent, on an annual basis.⁶ Additions to petroleum FDI fell by \$1.5 billion, or by 53 percent, between 1985 and 1986. This decline is in contrast to the 37 percent increase in additions to non-petroleum FDI, from \$17.1 billion to \$23.4 billion. Factors that favored direct investment in the United States included the lower value of the dollar relative to many other currencies, continued moderate economic growth, and tax reform provisions that favored earlier rather than later investment. As a result of the differing trends in investment, the petroleum share of total FDI in the United States declined from 15.3 percent in 1985 to 14.1 percent in 1986 (Table 1).

Outward investment in petroleum, as measured by additions to U.S. direct investment in foreign petroleum, appeared to rebound substantially in 1986 from near zero in the prior year to a positive \$3.2 billion (Figure 1). The negative value for 1985 is responsible for this impression. The sale of foreign assets by U.S. multinational petroleum companies reduced the U.S. direct investment position in foreign petroleum in 1985. For example, in 1985, Chevron sold its interest in Gulf Canada for \$2.1 billion and Occidental Petroleum received \$750 million for 50 percent of its interest in Colombian oil and gas operations. Examination of capital outlays by U.S. multinational energy companies indicates that investment commitments to foreign petroleum declined in 1986. For example, preliminary data for the 22 major energy companies that report to EIA's Financial Reporting System

⁶ Energy Information Administration, Monthly Energy Review, June 1987, DOE/EIA-0035(87/06) (Washington, DC, September 1987).

(FRS)⁷ show that these companies reduced their capital and exploratory expenditures for foreign petroleum by \$2.1 billion, to \$10.3 billion in 1986. A decline of this magnitude is not surprising, given the decline in oil prices in 1986. The decline in oil prices led to a sharp fall in the profitability of U.S. petroleum operations for foreign direct investors. For the first time since 1977 (the first year for which data were compiled for this report), the rate of return⁸ on FDI in U.S. petroleum was below that for overall FDI, falling from 8.0 percent in 1985 to 1.4 percent in 1986 (Figure 2). Excluding petroleum operations, the rate of return on FDI increased slightly between 1985 and 1986, from 2.7 percent to 3.2 percent.

Table 1. Foreign Direct Investment in U.S. Petroleum and U.S. Direct Investment in Foreign Petroleum, 1980-1986

Year	FDI in U.S. ^{a,b} Petroleum (billion dollars)	Total FDI in U.S. ^b (billion dollars)	Percent Petroleum of Total	U.S. Direct Investment in Foreign ^{a,c} Petroleum (billion dollars)	U.S. Direct Investment Abroad ^c (billion dollars)	Percent Petroleum of Total
1980	12.2	83.0	14.7	47.6	215.4	22.1
1981	15.2	108.7	14.0	53.2	228.3	23.3
1982	17.7	124.7	14.2	57.8	207.8	27.8
1983	18.2	137.1	13.3	57.6	207.2	27.8
1984	25.4	164.6	15.4	58.1	211.5	27.5
1985	28.3	184.6	15.3	58.0	229.7	25.3
1986	29.6	209.3	14.1	61.2	259.9	23.5

^aPetroleum Industry: includes all phases of petroleum exploration, production, refining, transport, and marketing.

^bThe Foreign Direct Investment (FDI) position is the value of foreign investors' net equity in, and outstanding loans to, U.S. affiliates at the end of the year.

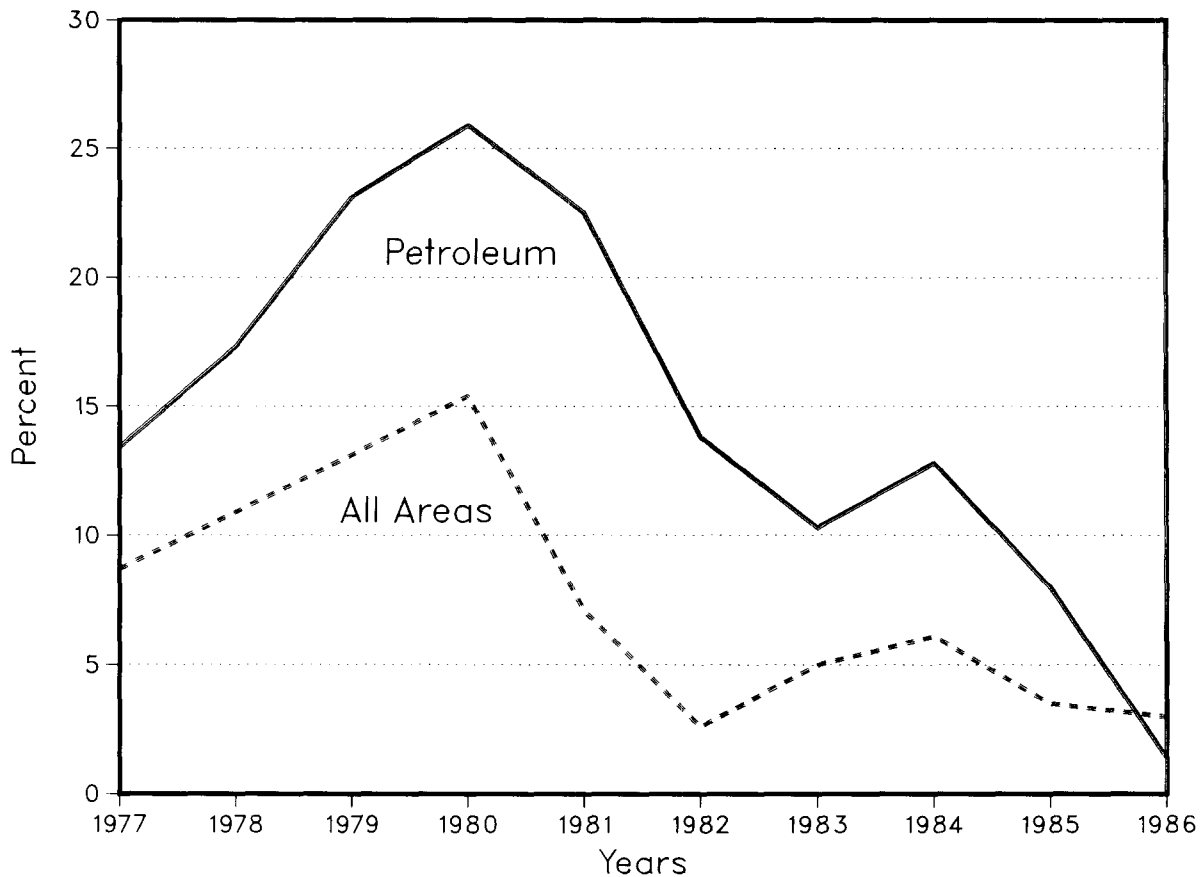
^cThe value of U.S. investors' net equity in, and loans to, foreign affiliates.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business (Washington, DC, August 1985, August 1987).

⁷ See Energy Information Administration, Performance Profiles of Major Energy Producers 1985, DOE/EIA-0206(85) (Washington, DC, January 1987), for detailed financial and operating information concerning the FRS companies.

⁸ The rate of return is defined as the foreign investors' income from foreign-affiliated U.S. companies divided by the average of the beginning-of-year and end-of-year balances of the parents' foreign direct investment position. The foreign investors' income from the foreign-affiliated U.S. company is calculated by including its share in net income (after U.S. income taxes) plus net interest aid to the parents' intercompany accounts, less withholding taxes on dividends and interest. This rate of return measure is not directly comparable to rates of return computed from corporate financial data. An analysis of rates of return based on financial data is provided in Chapter 4.

Figure 2. Rates of Return on Foreign Direct Investment in the United States, 1977-1986^a



^aDefined as annual income from Foreign Direct investment accruing to foreign parents divided by the average of beginning-year and ending-year FDI position of foreign parents.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, (Washington, DC, August 1982 and August 1987).

Sources of Foreign Direct Investment in U.S. Petroleum

As a share of FDI in U.S. petroleum, European interests and Canadian interests continued to decline in 1986. The Canadian share has declined steadily from 14.9 percent in 1980 to 4.7 percent in 1986. Petroleum FDI attributable to Canadian interests declined from \$1.6 billion to \$1.4 billion between 1985 and 1986 (Table 2 and Figure 3). The long-term decline was initially encouraged by government policies favoring Canadian ownership of energy resources located in Canada and more recently by relaxation of price controls and reduction in taxes related to oil and gas. Both sets of policies encouraged Canadians to invest in Canadian energy resources, apparently at the expense of U.S. petroleum investments. The reduction in the share of FDI in U.S. petroleum accounted for by European interests is largely the consequence of the growth in FDI by investors from other areas. Petroleum FDI attributed to European investors increased by a modest \$508 million but for investors based in Latin America and Other regions, FDI in U.S. petroleum rose by a combined \$1.1 billion which doubled the share of these two regions.

Table 2. Geographic Sources of Foreign Direct Investment in U.S. Petroleum, 1983-1986

Source	1983	1984	1985	1986	1983	1984	1985	1986
	(million dollars)				(percent of total)			
All Countries	18,209	25,400	28,270	29,627	100.0	100.0	100.0	100.0
Canada	1,391	1,544	1,589	1,385	7.6	6.1	5.6	4.7
Europe ^a	16,326	23,142	25,636	26,144	89.7	91.1	90.7	88.2
Netherlands	8,646	9,981	11,481	(^b)	47.5	39.3	40.6	(^b)
United Kingdom ...	5,955	10,991	12,155	11,553	32.7	43.3	43.0	39.0
Japan	-408	-88	31	-24	-2.2	-0.3	0.1	-0.1
Latin America ^c	829	656	577	965	4.6	2.6	2.0	3.3
Other	71	146	437	1,157	0.4	0.6	1.5	3.9
Memorandum:								
OPEC ^d	10	12	17	(^b)	0.1	(^e)	0.1	(^b)

^aEurope consists of Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Sweden, Switzerland, and the United Kingdom.

^bData withheld by U.S. Department of Commerce to prevent disclosure.

^cLatin America consists of Western Hemisphere nations excluding the United States, Puerto Rico, the U.S. Virgin Islands, and Canada.

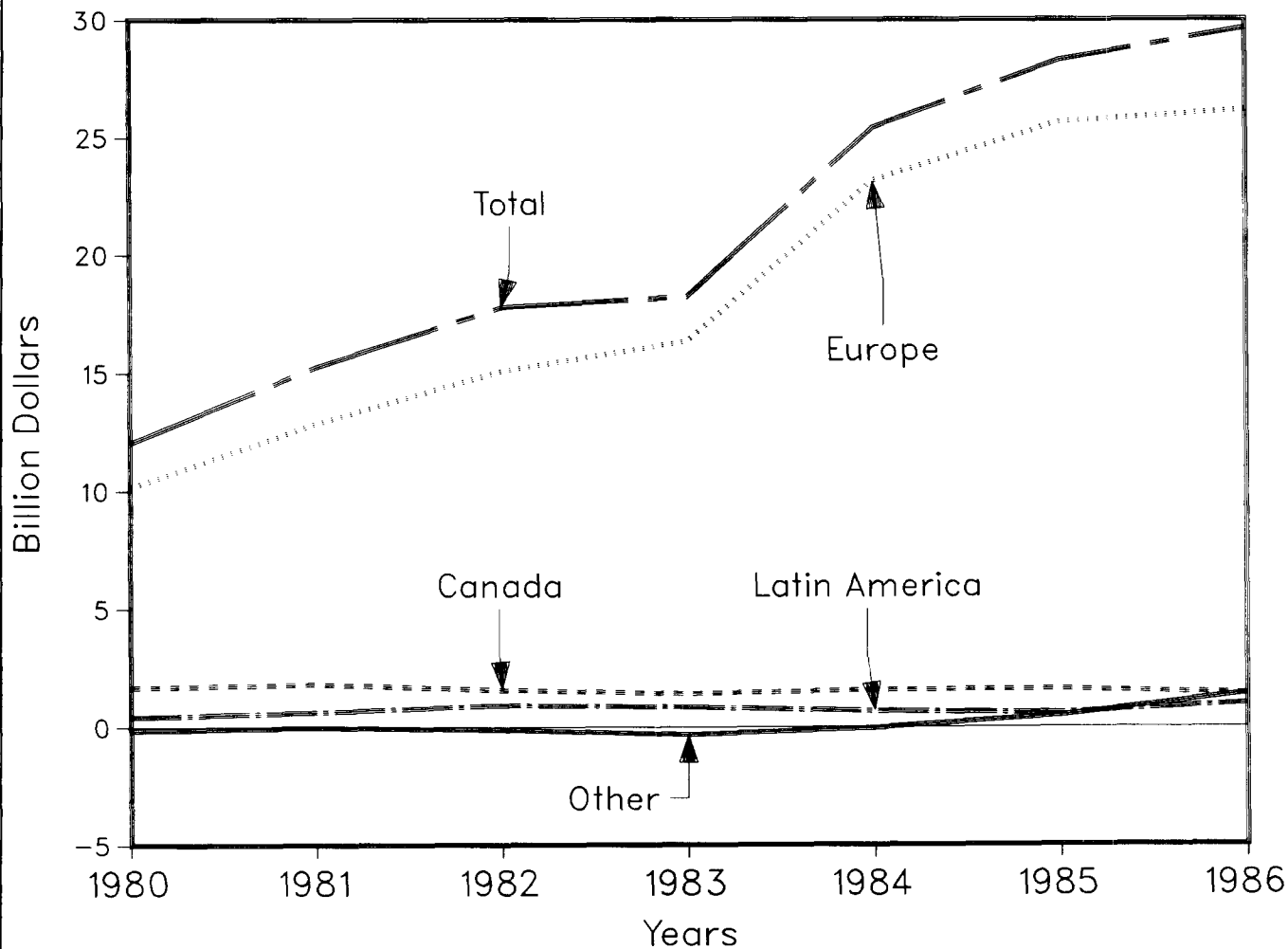
^dThe OPEC countries are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, Venezuela, and United Arab Emirates.

^eLess than .05 percent.

Note: Total may not equal sum of components due to independent rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business (Washington, DC, August 1987).

Figure 3. Sources of Foreign Direct Investment in U.S. Petroleum by Geographic Area, 1980-1986



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1987).

The two transactions that largely underlie this latter increase were the purchase of a 50-percent share in Citgo Petroleum by Petroleos de Venezuela and the cash/common stock transaction between Panhandle Eastern and Sonatrach, the Algerian national oil and gas company (both transactions are described in the previous section). Since Venezuela and Algeria are members of the Organization of Petroleum Exporting Countries (OPEC) these two transactions undoubtedly increased the OPEC share of FDI in U.S. petroleum. However, the actual magnitude of OPEC's position was not disclosed by the Department of Commerce (Table 3). Also, Kuwait Petroleum Corporation's investment in Santa Fe International, acquired in 1981 for approximately \$2.5 billion, is classified under the category of "Other" by the U.S. Department of Commerce even though Santa Fe International is a significant oil and gas producer. If the investment in Santa Fe International was classified as FDI in petroleum, then Kuwait would rank about third or fourth among countries with FDI in U.S. petroleum.

Table 3. OPEC Direct Investment in the United States, 1981-1986
(Million Dollars)

Investment Area	1981	1982	1983	1984	1985	1986
Petroleum	(^a)	6	10	12	17	(^a)
Manufacturing	49	31	-22	-21	-11	66
Wholesale Trade ...	(^a)	(^a)	139	167	137	74
Banking	122	202	205	268	345	354
Real Estate	376	555	614	707	726	872
Other	2,650	(^a)	3,093	3,759	3,393	(^a)
Total	3,336	4,045	4,039	4,892	4,607	5,103

^aData withheld by the U.S. Department of Commerce to prevent disclosure.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business (Washington, DC, August 1987).

For the fourth time in the past five years net capital flows⁹ from foreign investors to their U.S. petroleum affiliates exceeded reinvested earnings as a source of additions to FDI in U.S. petroleum. Indeed, reinvested earnings were negative in 1986, the first time that this has happened since 1977 (Table 4). Negative reinvestment occurred because the level of dividends distributed to foreign investors, though at their lowest level since at least 1981, far exceeded the earnings of their U.S. petroleum investments in 1986 (Table 5). It must be

⁹Equity and intercompany account capital flows measure the investment and lending from the foreign investor to its U.S. affiliate on a net basis. Since this measure is on a net basis, it can be negative if, as occurred in 1980 and 1983, repayments by a U.S. affiliate to its foreign parent exceed the investments by the parent in the affiliate. Reinvested earnings are earnings of the U.S. affiliate due the foreign investor less dividends declared.

**Table 4. Additions to Foreign Direct Investment in U.S. Petroleum,
1977-1986**
(Million Dollars)

Year	Total Additions	Equity and Intercompany Account Capital Flows	Reinvested Earnings of Incorporated Affiliates	Valuation Adjustments
1977	653	52	601	0
1978	1,189	303	940	-54
1979	2,144	499	1,645	0
1980	2,294	-59	2,161	192
1981	3,046	919	2,246	-119
1982	2,414	1,409	1,002	3
1983	549	-57	565	40
1984	7,191	5,581	1,628	-19
1985	2,869	2,581	565	-277
1986	1,357	1,985	-826	198

Note: Components may not sum to total due to independent rounding.

Sources: • U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business (Washington, DC, August 1982, October 1984, August 1986, and August 1987). • U.S. Department of Commerce, Bureau of Economic Analysis, Selected Data on Foreign Direct Investment in the United States, 1950-79 (Washington, DC, December 1984).

**Table 5. Distributed and Reinvested Earnings for
Foreign Direct Investment in U.S. Petroleum,
1981-1986**
(Million Dollars)

Year	Earnings	Distributed	Reinvested
1981	3,118	872	2,246
1982	2,241	1,237	1,004
1983	1,593	1,028	565
1984	2,402	774	1,628
1985	1,668	1,103	565
1986	-124	702	-826

Sources: • 1985 and 1986: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business (Washington, DC, August 1987). • 1984: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business (Washington, DC, August 1986). • All 1983 data and reinvested earnings for 1981 and 1982: Survey of Current Business (Washington, DC, August 1985). • Earnings for 1981 and 1982: Survey of Current Business (Washington, DC, October 1984); distributed earnings for 1981 and 1982 were computed as the difference between earnings and reinvested earnings.

noted that petroleum earnings were reduced not only by sharply lower oil and gas prices in 1986, but also by substantial writedowns of asset values and other unusual charges. For example, Schlumberger Ltd. reported unusual charges of \$1.7 billion (after tax) and Standard Oil reported unusual charges of \$622 million (after tax) in 1986.¹⁰ Since unusual charges such as writedowns of the book values of assets tend not to require actual cash outlays they do not necessarily impair a company's ability to pay dividends.

Foreign Direct Investment and Rates of Return in U.S. Coal

U.S. coal production remained an area of foreign investor interest in 1986. Due to major acquisitions in 1981 and 1984, foreign-affiliated coal producers' share of U.S. bituminous coal and lignite production rose from 4 percent in 1980 to more than 17 percent in 1984 (production data are discussed in Chapter 3). With no major coal acquisitions in either 1985 or 1986, the foreign affiliates' share had fallen to 16.4 percent by 1986.

Additions to FDI in U.S. coal were \$222 million in 1986, down slightly from \$234 million in 1985 (Table 6). The major FDI-related transactions in coal operations involved Du Pont's Consolidation Coal unit: a \$106 million purchase of low-sulfur coal properties from Inland Steel Company and the acquisition of Sierra Coal Company (Kentucky), a unit of Broken Hill Proprietary Company, Ltd. (Australia), for \$49 million.

Table 6. Foreign Direct Investment, Additions to Foreign Direct Investment, and Rate of Return on Foreign Direct Investment in U.S. Coal, 1980-1986

Investment and Rate of Return	1980	1981	1982	1983	1984	1985	1986
	(million dollars)						
FDI in U.S. Coal	478	1,135	1,208	1,281	2,637	2,871	3,093
Additions to FDI in U.S. Coal	--	657	73	73	1,356	234	222
	(percent)						
Rate of Return on FDI in U.S. Coal	--	1.9	-3.0	(^a)	-7.0	-12.0	-5.8

^aLess than .05 percent.

-- = Not available.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business (Washington, DC, August 1987).

¹⁰ Company annual reports to shareholders.

3. Profiles of Foreign-Affiliated Companies' Roles in U.S. Energy Operations

Oil and Gas Reserves and Production

Crude oil and natural gas liquids (NGL) reserves of foreign-affiliated companies fell to 5.6 billion barrels by the end of 1986.¹¹ While this represented a drop of 278 million barrels from the previous year, the foreign-affiliated share of total U.S. proved reserves only fell slightly (15.9 percent versus 16.1 percent) (Table 7). A similar result occurred with natural gas reserves. Gas reserves were reduced among foreign-affiliated companies by 604 million cubic feet between 1985 and 1986, while the percent share went from 9.7 percent to 9.5 percent. Most of the change in the oil reserves was caused by declines in reserve additions by Standard Oil and Du Pont. The replenishment of oil and gas reserves also deteriorated in 1986. For example, the ratio of foreign affiliates' gross reserve additions to production suffered a major decline for both oil and gas, and stood at 0.49 in both cases.

By comparison, the foreign oil reserve holdings of U.S. companies were over two and a half times those of the foreign affiliates' U.S. reserves. The total crude oil and NGL interests of the 22 U.S. energy companies reporting to EIA's Financial Reporting System (FRS)¹² in 1985 was 14.6 billion barrels (Table 8). These reserves accounted for 2.4 percent of the total free-world holdings outside of the United States, similar to the percent share of the past few years.¹³ However, production of crude oil and NGL to which these companies had direct access, through net ownership production and special purchase arrangements, exceeded their share of reserves but fell from 17¹⁴ percent to 12 percent of non-U.S. free-world production between 1984 and 1985.

Crude oil and NGL production of foreign affiliates in the United States continued to rise in 1986. Total production, at 1,506.5 thousand barrels per day (mb/d) in 1986, represented 14.6 percent of total U.S. production (Table 9). While the absolute growth in production among foreign affiliates was down in 1986 from 1985, their share was up from 13.7 percent in 1985 because total U.S. production fell by 347 mb/d. Moreover, the 1986 production gain was largely traceable to the reserve purchases of Shell Oil Company, which increased its U.S. oil reserves by 8 percent, and whose production rose by 8 percent. Foreign affiliates' natural gas production in the United States registered an even larger gain in 1986, up by 97.7 billion cubic feet, compared to the gain in 1985. However, while Shell Oil Company again experienced the largest increase, sizeable production gains were

¹¹ Reserves and production data reported in this section are on a net ownership basis and were compiled from company annual reports to shareholders and on the Securities and Exchange Commission Form 10-K.

¹² Energy Information Administration, Performance Profiles of Major Energy Producers 1985, DOE/EIA-0206(85) (Washington, DC, January 1987), for detailed financial and operating information concerning the FRS companies.

¹³ British Petroleum Company, BP Statistical Review of World Energy (London, June 1986).

¹⁴ Direct access includes net ownership production, foreign access, and purchases from the unconsolidated affiliates. For the FRS companies, direct access equalled 11.7 billion barrels (Energy Information Administration, Performance Profiles of Major Energy Producers 1985).

Table 7. Domestic Oil and Dry Natural Gas Proved Reserves and Production for Foreign-Affiliated U.S. Companies, 1985 and 1986

Fuel Type	Foreign-Affiliated Companies ^a	U.S. Total	Foreign-Affiliated Share of U.S. Total (percent)
Crude Oil and Natural Gas Liquids^b			
Proved Reserves			
December 31, 1984	5,800	36,089	16.1
December 31, 1985	5,863	36,360	16.1
1985 Production	530	3,805	13.9
1985 Gross Reserve Additions	593	4,076	14.5
1985 Ratio of Gross Reserve Additions to Production	1.12	1.07	NM
Proved Reserves			
December 31, 1985	5,847	36,360	16.1
December 31, 1986	5,569	35,054	15.9
1986 Production	549	3,711	14.8
1986 Gross Reserve Additions	271	2,405	11.3
1986 Ratio of Gross Reserve Additions to Production	0.49	0.65	NM
Dry Natural Gas^c			
Proved Reserves			
December 31, 1984	18,421	197,463	9.3
December 31, 1985	19,014	193,369	9.8
1985 Production	1,084	15,985	6.8
1985 Gross Reserve Additions	1,677	11,891	14.1
1985 Ratio of Gross Reserve Additions to Production	1.55	0.74	NM
Proved Reserves			
December 31, 1985	18,755	193,369	9.7
December 31, 1986	18,151	191,586	9.5
1986 Production	1,172	15,610	7.5
1986 Gross Reserve Additions	569	13,827	4.1
1986 Ratio of Gross Reserve Additions to Production	0.49	0.89	NM

^aReserves and production are on a net working interest basis. The first set of reserves and production data, under each fuel type, is for companies identified as foreign-affiliated and reporting oil and/or natural gas production during 1985. The second set of data is for companies identified as foreign-affiliated during 1986 and reporting oil and/or natural gas production.

^bMillions of 42-gallon U.S. barrels.

^cBillions of cubic feet, 14.73 psia, 60 degrees Fahrenheit.

NM = Not meaningful.

Sources: • Foreign-affiliated data: Companies' Form 10-K filed with the Securities and Exchange Commission and Annual Reports to Shareholders. • U.S. totals: Energy Information Administration, U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1986 Annual Report, DOE/EIA-0216(86) (Washington, DC, October 1987).

Table 8. Foreign Crude Oil and Natural Gas Liquids Reserve Interest for FRS Companies, 1985 and Percent Change from 1984

Crude Oil and NGL Reserve Interest	Total Foreign	Canada	OECD Europe	Africa	Middle East	Other Eastern Hemisphere	Other Western Hemisphere
(million barrels)							
1985							
Total Crude and NGL Reserve Interest ^a	14,587	2,352	4,215	2,879	2,084	2,082	977
(percent)							
Percent Distribution by Geographic Region, 1985							
Total Crude and NGL Reserve Interest ...	100.0	16.1	28.9	19.7	14.3	14.3	6.7
Percent Change from 1984							
Total Crude and NGL Reserve Interest	-0.3	-2.8	-2.1	-1.8	3.0	3.5	4.0

^aThe components of total foreign crude oil and natural gas liquids reserve interest are net ownership interest reserves (89.6 percent) and "Other Access" reserves (10.5 percent). "Other Access" reserves include proportional interest in investee reserves and foreign access reserves.

Note: Total may not equal sum of components due to independent rounding. While four of the FRS companies are foreign-affiliated, their foreign reserves are a small portion of the FRS total.

Source: Energy Information Administration, Performance Profiles of Major Energy Producers 1985, DOE/EIA-0206(85) (Washington, DC, January 1987).

Table 9. Net Production of Petroleum and Dry Natural Gas in the United States by Foreign-Affiliated U.S. Companies, 1984-1986

Company	Crude Oil and Natural Gas Liquids ^a			Dry Natural Gas ^a		
	1984	1985	1986	1984	1985	1986
	(thousand barrels per day)			(billion cubic feet)		
Standard Oil Company	633.9	718.6	720.8	^b 32.1	^b 40.2	^b 56.4
Shell Oil Company	532.8	528.8	572.6	590.0	602.0	653.0
Du Pont	120.2	120.5	126.0	248.0	231.0	248.0
American Petrofina	18.8	18.6	17.4	22.4	25.4	25.5
BHP Petroleum (Americas)	2.7	13.7	14.0	6.9	27.4	35.5
W.R. Grace Company	8.5	5.1	NF	30.8	24.6	NF
Adobe Resources Corporation	(^c)	2.6	7.2	(^c)	5.4	17.6
Adobe Oil and Gas Corporation	4.5	(^c)	(^c)	10.3	(^c)	(^c)
Total Petroleum Limited	4.4	4.5	6.2	8.3	8.0	9.8
Elf Aquitaine Incorporated	4.0	4.0	6.0	21.2	14.1	24.7
Newmont Mining	4.0	3.9	3.9	11.3	11.1	11.9
Home Petroleum ^d	3.9	4.3	3.6	14.0	13.0	9.0
Sunshine Mining Company	0.4	2.0	3.4	0.9	6.5	13.1
Unimar Company	4.4	3.9	3.3	15.0	12.2	11.2
Deminex U.S. Oil Company	2.3	2.2	2.0	3.7	3.9	3.7
Wintershall Corporation	0.9	1.2	2.0	1.9	2.9'	5.3
Bow Valley Industries	2.6	2.7	1.9	3.6	4.1	3.4
Placer Development Limited	1.1	1.7	1.8	3.5	5.1	7.2
Triton Energy Corporation	1.2	1.2	1.8	2.5	3.0	4.6
Britoil U.S. Holdings Incorporated	0.9	1.7	1.7	3.9	7.9	7.7
Universal Resources Corporation	2.3	1.9	1.5	7.7	8.6	7.3
Canterra Energy Limited	1.9	1.8	1.5	2.7	3.8	3.7
Chieftain Development Company, Limited ...	0.1	0.5	1.5	0.4	0.2	0.2
Gulf Resources & Chemicals	1.6	1.4	1.2	10.3	9.0	7.9
Hamilton Oil Corporation	0.9	1.0	1.2	5.8	5.2	5.4
Other Companies	6.5	4.4	4.0	18.2	13.4	13.0
Total Foreign Affiliated	1,364.8	1,452.2	1,506.5	1,075.4	1,088.0	1,185.1
Total for United States ^e	10,554.0	10,636.0	10,289.0	17,392.0	16,382.0	16,036.0
Percent Foreign Affiliated	12.9	13.7	14.6	6.2	6.6	7.4

^aUnless otherwise noted, company production is net working interest production.

^bReported natural gas sales.

^cAdobe Resources Corporation was formed through the consolidation of Adobe Oil and Gas Corporation and Madison Resources, Inc., in 1985.

^dPreviously reported as Hiram Walker Resources Ltd.

^eCrude oil and NGL production is the sum of field production of crude oil and natural gas plant liquids. Natural gas production is total dry gas production.

NF = Not foreign-affiliated in year shown.

Note: Total may not equal sum of components due to independent rounding.

Sources: • Company data: Form 10K reports to the Securities and Exchange Commission and Annual Reports to Shareholders. • Totals for the United States: Energy Information Administration, Monthly Energy Review, June 1987, DOE/EIA-0035(87/06) (Washington, DC, September 1987).

also made by Standard Oil Company, Du Pont, Adobe Resources, and Elf Aquitaine (Table 9). As with crude oil and NGL, the foreign-affiliates' production gains in natural gas were counter to the industry trend.

Refining and Gasoline Marketing

Foreign-affiliated companies' refining capacity in the United States increased by 14.5 percent from 1985 to 1986, following a similar increase between 1984 and 1985. The foreign affiliates' total crude oil distillation capacity stood at 2,979 mb/d at the end of 1986, which was the highest level since at least 1977. The added capacity resulted in a 19.1 percent share of U.S. crude distillation capacity for the foreign-affiliated companies, which was another high (Table 10). Petroleos de Venezuela's acquisition of a 50-percent interest in Citgo Petroleum's Lake Charles, Louisiana refinery, and Sargent Holdings' purchase of Powerine's Santa Fe Springs, California refinery added 320 mb/d and 33 mb/d, respectively, to the total capacity of foreign affiliates.

As a contrast to Table 10, Table 11 provides an indication of U.S. companies' refining activity abroad. The FRS companies, which account for almost all of U.S. involvement in foreign refining, have been steadily decreasing their downstream commitments. Their refinery capacity and refinery output, as well as their percent share of foreign industry capacity and output, have all decreased. Preliminary data for their 1986 refinery capacity show a further decline (down 8.8 percent from 1985), while their capacity share was reduced to 12 percent.

The role of foreign-affiliated companies in U.S. gasoline marketing decreased in 1986 after a fairly large increase in 1985. Five companies followed the national trend and decreased the number of branded retail outlets, while only two companies added new outlets (Table 12). Among the latter, Atlantic Petroleum bought 53 Northeast outlets from Ultramar and Shell Oil added just 4. The foreign-affiliated companies' U.S. retail outlets now represent 21.8 percent of the total in the United States, nearly equal to their 22 percent share in 1985. A similar result occurred with gasoline supplies. However, while the foreign affiliates supplied 22,000 fewer barrels a day in 1986, an increase of 203,000 barrels a day by the total U.S. industry resulted in a larger drop in the former's share of the industry from 1985 to 1986 (18.8 percent to 18.0 percent).

Coal Production

Bituminous coal and lignite production of foreign-affiliated companies declined 0.8 percent in 1986, following a 4.0 percent decline in 1985. Production for the U.S. coal industry as a whole grew by 0.8 percent, which resulted in the foreign-affiliated companies' share dropping from 16.7 percent to 16.4 percent (Figure 4). In 1986, the minor decline was caused by a general downward trend among the foreign affiliates. Countering the downward trend in the foreign group was Standard Oil of Ohio's Old Ben Coal Company, which increased production in 1986 by almost 3 million tons (Table 13).

Table 10. U.S. Refinery Operations of Foreign-Affiliated U.S. Companies, 1982-1986

Company	Number of Refineries ^a					Total Crude Distillation Capacity ^a				
	1982	1983	1984	1985	1986	1982	1983	1984	1985	1986
	(thousand barrels per day)									
Shell Oil Company	7	7	7	7	7	1,092	1,005	1,115	1,020	1,046
Standard Oil	3	3	3	4	4	456	456	456	664	668
Du Pont	7	7	7	6	6	421	421	430	400	393
Citgo Petroleum	NF	NF	NF	NF	1	NF	NF	NF	NF	320
Total Petroleum, Ltd.....	3	3	3	3	3	145	145	145	152	154
American Petrofina	2	2	2	2	2	150	150	150	150	145
Atlantic Petroleum	NF	NF	NF	1	1	NF	NF	NF	125	125
Husky Oil Company	2	2	(b)	(b)	(b)	54	54	(b)	(b)	(b)
ATC Petroleum	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Sargent Holdings, Ltd.....	NF	NF	NF	NF	1	NF	NF	NF	NF	33
Fletcher Oil & Refining	1	1	1	1	1	30	30	30	30	30
Asamera Inc.....	1	1	1	1	1	26	26	26	26	28
MacMillan Ring-Free Oil Company	2	2	2	2	2	17	17	17	17	20
American Ultramar, Ltd.....	1	(d)	(d)	(d)	(d)	17	34	34	17	17
Golden Eagle Oil Co.....	1	(c)	(c)	(c)	(c)	16	(c)	(c)	(c)	(c)
Adobe Oil and Gas Co.....	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Total Foreign Affiliated ...	30	30	28	28	30	2,423	2,337	2,293	2,601	2,979
Total United States	258	247	223	216	219	16,859	16,137	15,659	15,459	15,566
Percent Foreign Affiliated	11.6	12.1	12.6	13.0	13.7	14.4	14.5	14.6	16.8	19.1

^aRefineries operable as of December 31st in each year. Beginning in 1986, the Hawaiian Independent Refinery (66,000 barrels per calendar day) is included in the U.S. total.

^bSold to RMT Properties, Inc. in 1984.

^cShutdown.

^dIncluded with American Ultramar, Ltd., after 1982. Refinery was shutdown in February 1985.

NF = Not foreign affiliated in the year shown.

Sources: • 1982: Energy Information Administration, Petroleum Supply Annual 1982, Volume 1, DOE/EIA-0340(82)/1(Washington, DC, June 1983). • 1983: Energy Information Administration, Petroleum Supply Annual 1983, Volume 1, DOE/EIA-0340(83)/1(Washington, DC, June 1984). • 1984: Energy Information Administration, Petroleum Supply Annual 1984, Volume 1, DOE/EIA-0340(84)/1(Washington, DC, June 1985). • 1985: Energy Information Administration, Petroleum Supply Annual 1985, Volume 1, DOE/EIA-0340(85)/1(Washington, DC, May 1986). • 1986: Energy Information Administration, Petroleum Supply Annual 1986, Volume 1, DOE/EIA-0340(86)/1(Washington, DC, May 1987).

Table 11. Foreign Refinery Output and Capacity Statistics^a for FRS Companies and Foreign Industry, 1984 and 1985

Refinery Statistics	FRS Companies (thousand barrels per day)	Foreign Industry	FRS Percent of Industry
1984			
Refinery Output ^b	4,696	32,501	14.4
Percent Gasoline	27.2	19.6	20.1
Percent Distillate	34.9	34.3	14.7
Percent Other	37.9	46.1	11.9
Refinery Capacity ^c	6,272	41,291	15.2
1985			
Refinery Output ^b	4,137	32,191	12.9
Percent Gasoline	30.0	20.1	19.2
Percent Distillate	37.8	35.1	13.9
Percent Other	32.1	44.8	9.2
Refinery Capacity ^c	5,083	38,647	13.2

^aForeign FRS and foreign industry data exclude operations in Puerto Rico and the U.S. Virgin Islands, as well as China and the Soviet Bloc.

^bTotal output of refined products, for FRS companies, is total output at own refineries and refineries of others for own account.

^cYear-end crude distillation capacity in thousand barrels per calendar day.

Note: Total may not equal sum of components due to independent rounding.

Sources: • FRS Companies: Energy Information Administration, Performance Profiles of Major Energy Producers 1985, DOE/EIA-0206(85) (Washington, DC, January 1987). • Foreign Industry: Energy Information Administration, International Energy Annual 1985, DOE/EIA-0219(85) (Washington, DC, October 1986) and Energy Information Administration, International Energy Annual 1986, DOE/EIA-0219(86) (Washington, DC, October 1987).

Table 12. Branded Retail Outlets and Total Gasoline Supplied by Foreign-Affiliated U.S. Companies, 1984-1986

Company	1984	1985	1986
	Total Branded Retail Outlets		
Shell Oil Company	11,010	11,129	11,133
Du Pont	5,430	6,276	5,400
American Petrofina	4,385	4,249	4,239
Standard Oil Company	2,100	2,900	2,800
Total Petroleum, Limited	1,847	1,942	1,915
Atlantic Petroleum	NF	547	600
Ultramar Petroleum	368	378	136
Husky Oil Company	720	0	0
Asamera Oil Company	0	0	0
Total for Above	25,860	27,421	26,223
U.S. Total ^a	132,080	124,600	120,150
Percent of U.S. Total for Above	19.6	22.0	21.8
	Total Gasoline Supplied ^b		
	(thousand barrels per day)		
Total Foreign Affiliated ^c	1,066	1,285	1,263
U.S. Total	6,693	6,831	7,034
Percent Foreign Affiliated ...	15.9	18.8	18.0

^aService station establishments with 50 percent or more of their dollar volume from petroleum product sales.

^bGasoline supplied refers to average daily gasoline shipments.

^cDisaggregated company numbers are considered proprietary by the Energy Information Administration.

NF= Not foreign affiliated in the year shown.

Sources: • Company station counts: National Petroleum News (Factbook Issue), 1984-1987, except for Du Pont (1984), Standard Oil Company (all years), and Husky Oil Company (1983 and 1984) for which data were taken from Annual Reports to Shareholders and Atlantic Petroleum for which data were provided by the company. • U.S. total outlets: U.S. Department of Commerce, Franchising in the Economy, 1985-1987 (Washington, DC, February 1987).

• Company gasoline volumes: Energy Information Administration, Form EIA-782c. • Total gasoline supplied: Energy Information Administration, Monthly Energy Review, June 1987, DOE/EIA-0035(87/06) (Washington, DC, September 1987).

Table 13. Bituminous Coal and Lignite Production and Source of Ownership of Foreign-Affiliated Coal Companies in the United States, 1984-1986

Controlling Company	Foreign-Ownership Interest	Coal Production ^a		
		1984	1985	1986
		(thousand short tons)		
Consolidation Coal Company, (Du Pont)	JES Holding, Inc.....	42,796	42,702	41,529
A.T. Massey Coal Company	Royal Dutch Shell ^b	23,541	24,407	23,229
Standard Oil of Ohio	British Petroleum.....	15,666	12,273	15,220
Utah International, Incorporated	Broken Hill Proprietary Co.....	15,189	13,812	12,651
Westmoreland Coal Company	Veba Kohle International.....	12,511	10,876	9,840
Shell Mining Company	Royal Dutch Shell.....	8,085	8,240	8,738
Pyro Mining Company	Costain Group	4,200	4,854	5,258
Pickards Mather & Company	Steel Company of Canada.....	2,672	3,561	3,555
Cannelton Industries, Incorporated	Algoma Steel Corp., Ltd.....	2,631	3,003	3,411
Enoxy Coal, Incorporated	Ente Nazionale Idrocarburi ^d	3,771	4,585	3,377
M.A. Hanna Company	Norcen Energy Resources, Ltd.....	3,824	3,734	3,428
Ashland Coal Company	Saarbergwerke AG/Carboex.....	2,903	2,798	3,269
Inspiration Coal, Incorporated	Hudson Bay Mining and Smelting Co., Ltd....	1,355	2,762	2,859
Andalex Resources, Inc. ^e	Andalex Resources, Inc.....	2,519	1,660	2,602
Great Western Coal Inc. ^f	Great Western Resources, Inc.....	2,745	2,453	2,597
Gulf Resources and Chemical	HCI Holdings, Ltd./Private Investor.....	3,444	2,698	2,139
Total Energy Resources	Total Compagnie Francaise de Petroles.....	637	846	597
Canterra Energy ^g	Canada Development Corporation.....	998	542	526
Carter-Roag Coal Company, Incorporated	Roag Rohstoff und Verarbeitungs.....	215	300	267
Avery Coal Company	Trafalgar Industries.....	127	127	267
Coal Corp. of America (Shaker Division)	Campbell Resources.....	646	586	250
Adobe Oil and Gas Corporation	Francana Oil and Gas, Ltd.....	2,178	0	0
Husky Oil Company	Husky Oil, Ltd.....	205	0	0
Total Foreign Affiliated	--	152,858	146,819	145,609
Total United States	--	891,759	878,930	886,023
Percent Foreign Affiliated	--	17.1	16.7	16.4

^a Coal production refers to lignite and bituminous coal production only.

^b Joint venture with Fluor Corporation.

^c Joint Venture with Pyro Energy Corporation.

^d Joint venture with Occidental Petroleum Corp.

^e Previously reported as W.R. Grace and Company, which is also a joint venture with M.A. Hanna Company.

^f Previously reported as AMCA Resources.

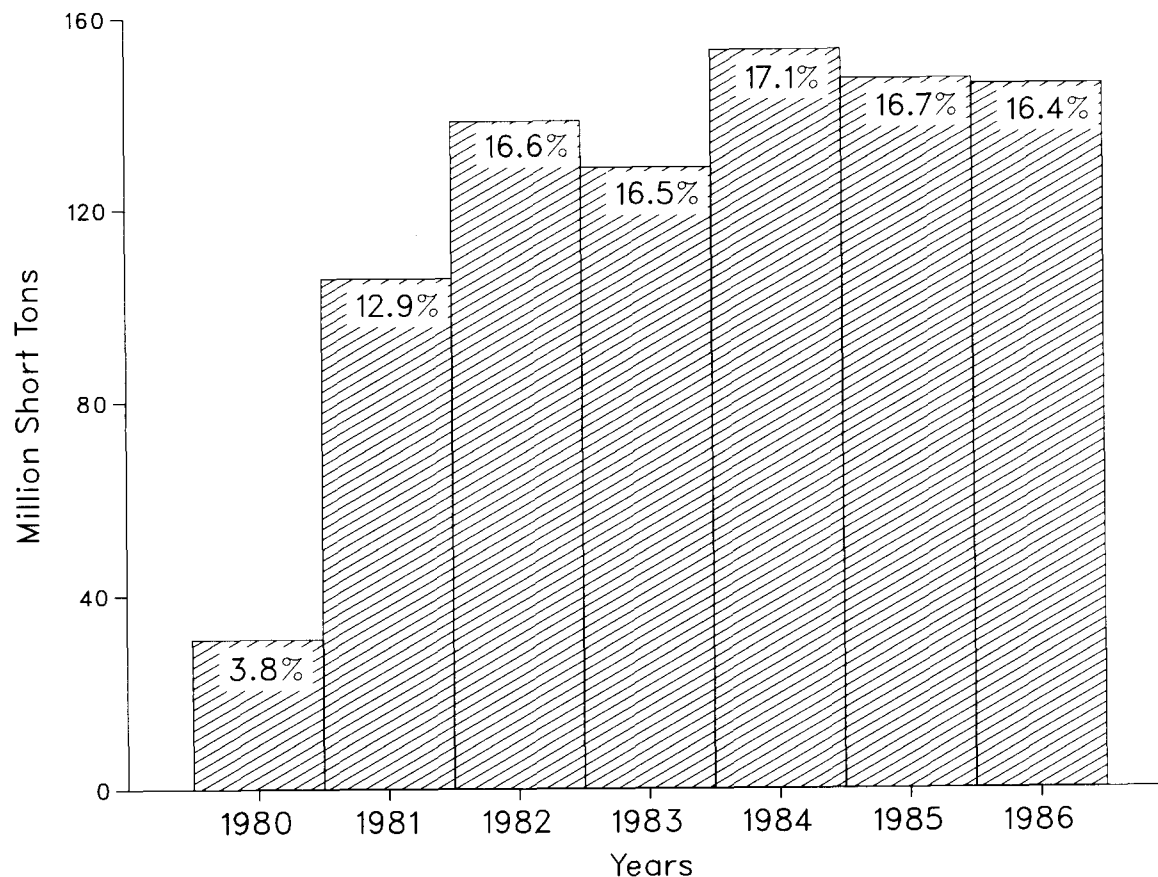
^g Previously reported as Bow Valley Coal Resources.

^h Previously reported as Aquitaine Company of Canada.

NF = Not foreign affiliated in the year shown.

Sources: • Coal ownership: Energy Information Administration, U.S. Department of Energy, Directory of Coal Production Ownership 1979, DOE/EIA-0310 (Washington, DC, October 1981); Moody's Industrial Manual, 1985-87; U.S. Department of Commerce, International Trade Administration, Foreign Direct Investment Activity in the United States, monthly reports. • Coal company production data: Keystone Coal Industry Manual, 1985-1987 except Adobe Oil and Gas Corporation for which production was reported in their Annual Report to Shareholders. • U.S. total for coal production: Energy Information Administration, Quarterly Coal Report, DOE/EIA-0121(87/2Q) (Washington, DC, October 1987).

Figure 4. Production and Share of U.S. Total Bituminous Coal and Lignite of Foreign-Affiliated U.S. Companies, 1980-1986



Sources: • 1980: U.S. Department of Energy, *Annual Report to Congress*, Appendix A, DOE/S-0010(84) (Washington, DC, September 1984). • 1981: Energy Information Administration, *Profiles of Foreign Direct Investment in U.S. Energy, 1983*, DOE/EIA-0466 (Washington, DC, February 1985). • 1982-1986: *Keystone Coal Industry Manual*, 1983-1987 editions. • U.S. Totals: Energy Information Administration, *Quarterly Coal Report*, DOE/EIA-0121(87/2Q) (Washington, DC, October 1987).

Uranium Exploration and Development

Expenditures for uranium exploration and development in the United States grew by a modest 10 percent between 1985 and 1986 to \$22.1 million (Table 14). The vast majority of this increase was accounted for by foreign joint-venture activity in the Rocky Mountain states. For example, Rocky Mountain Energy began work in northern Arizona on a 5-year, \$18 million joint-venture agreement with the Taiwan Power Company. The total expenditures of foreign-affiliated companies more than doubled to \$11.3 million, resulting in an unprecedented 51.2 percent share of total uranium industry spending in 1986. The foreign investors' percent share of the industry's activity can be expected to remain high, given the continued weak position of the domestic industry.¹⁵

Table 14. Foreign Participation in U.S. Uranium Exploration and Development, 1976-1986

Year	Exploration and Development Expenditures by Foreign Companies	Total U.S. Exploration and Development Expenditures	Foreign Percent of U.S. Total	Number of Foreign-Affiliated Companies
	(million dollars)			
1976	13.2	170.7	7.7	15
1977	21.7	258.1	8.4	17
1978	39.3	314.3	12.5	31
1979	34.1	315.9	10.8	28
1980	37.6	267.0	14.1	28
1981	24.6	144.8	17.0	25
1982	14.6	73.6	19.8	14
1983	4.8	36.9	13.0	9
1984	6.6	26.5	24.9	9
1985	5.3	20.1	26.1	6
1986	11.3	22.1	51.2	8

Source: Energy Information Administration, Uranium Industry Annual 1986, DOE/EIA-0478(86) (Washington, DC, October 1987).

¹⁵Energy Information Administration, Domestic Uranium Mining and Milling Industry: 1986 Viability Assessment, DOE/EIA-0477(86) (Washington, DC, November 1987).

4. Financial Profiles and Transactions of Foreign-Affiliated U.S. Energy Companies

As stated in the first section of this report, the measures of FDI and associated income published by the U.S. Department of Commerce are designed to conform with the international transactions accounts. These measures are not designed to gauge the performance of foreign-affiliated U.S. companies from a financial reporting perspective. In this section, comparisons of corporate financial indicators between foreign-affiliated U.S. energy companies and other U.S. energy companies are presented.¹⁶ Aspects of corporate financial performance reported in this section include investment, growth, and profitability.

Financial Profiles

The financial performance of energy companies was severely affected by the decline in oil and gas prices. Crude oil prices, as measured by the average wellhead price, declined from \$24.09 per barrel in 1985 to \$12.66 per barrel in 1986, while the average wellhead price of natural gas prices declined from \$2.51 per thousand cubic feet in 1985 to \$1.87 in 1986, or by 25 percent.¹⁷ Coal prices were also affected, falling from \$25.10 per ton to \$24.50 per ton over the same period.¹⁸ Although the fall in oil prices benefited refining and marketing operations through improved margins and increased demand, the gains in downstream income were overwhelmed by the effects of lower oil prices on upstream income. Table 15 shows that for the publicly-traded companies classified in energy industries, net income declined 52 percent in 1986 following a 36 percent decline in 1985. Declines in overall profitability of energy companies, as measured by return on equity, evidenced a similar relative decline, falling to a dismal 3.8 percent in 1986. By contrast, net income for all U.S. manufacturing corporations was essentially flat between 1985 and 1986 as was their overall 10-percent return on equity.

For both the foreign-affiliated energy companies and the energy industry comparison group, 1986 net income was down considerably from the prior year. The \$3.8 billion decline in net income of the foreign affiliates led to net losses of \$0.7 billion (Table 16). Return on equity declined from 6.1 percent in 1985 to a negative 1.5 percent in 1986. The primary source of reduced income was lower energy prices, but restructuring also contributed to the reduction in

¹⁶ The financial information presented in this section was drawn from the consolidated financial statements contained in Standard and Poor's Compustat II Industrial File. The energy industry comparison group is composed of companies other than the foreign-affiliated companies on the Compustat file that are classified under the four-digit Standard Industrial Classification (SIC) industry categories of crude oil and natural gas production (1311), petroleum refining (2911), oil field services (1381, 1382, and 1389), and bituminous coal and lignite production (1211), excluding companies that have been identified as foreign-affiliated, or companies whose operations are foreign-based, or companies whose operations are already included in U.S. companies that have been identified as foreign-affiliated.

¹⁷ Energy Information Administration, Monthly Energy Review, June 1987, DOE/EIA-0035(87/06) (Washington, DC, September 1987), pp. 93, 107.

¹⁸ Energy Information Administration, Annual Energy Review 1986, DOE/EIA-0384(86) (Washington, DC, May 1987), p. 179.

Table 15. Annual Change in Net Income and Return on Stockholders' Equity, 1984-1986
(Percent)

Industries	Percent Change in Net Income			Return on Stockholders' Equity ^a		
	1984	1985	1986	1984	1985	1986
Total Energy Industries ^b	10.7	-35.5	-51.7	12.3	8.0	3.8
All U.S. Manufacturing Corporations	25.4 ^c	-18.6 ^c	0.0 ^{c d}	12.5	10.1	9.9 ^d

^aNet income as a percent of end-of-year stockholders' equity.

^bIncludes all companies on the Compustat II Industrial File classified in the Standard Industrial Code (SIC) industries 1211 (bituminous coal and lignite mining), 1311 (crude petroleum and natural gas production), 1381 (oil and gas well drilling), 1382 (oil and gas field exploration), 1389 (oil and gas field services), and 2911 (petroleum refining).

^cPercent change in corporate profits after income taxes.

^d1986 figure is the annual average through the third quarter.

Sources: • Energy Industries: Compustat II Industrial File. • Corporate profits after income taxes for all U.S. manufacturing corporations and return on stockholders' equity for all U.S. manufacturing corporations: Economic Report of the President 1987, p. 346.

Table 16. Selected Financial Information for Foreign-Affiliated U.S. Energy Companies, 1985 and 1986

Category	Foreign-Affiliated U.S. Energy Companies ^a			Energy Industry Comparison Group ^b		
	1985	1986	Percent Change	1985	1986	Percent Change
Financial Items	(billion dollars)			(billion dollars)		
Revenues	84.7	71.0	-16.2	431.3	324.0	-24.9
Net Income	3.1	-0.7	-122.6	9.3	2.7	-71.0
Cash Flow ^c	15.3	12.3	-19.6	53.6	42.3	-21.1
Capital Outlays	12.7	8.7	-31.5	40.4	28.6	-29.2
Total Assets	102.9	96.1	-6.6	387.1	381.2	-1.5
Financial Ratios	(percent)					
Return on Equity ^d ...	6.1	-1.5		6.7	1.9	
Dividends/Net Income	85.8	NM		134.4	398.6	
Dividends/Cash Flow	17.6	22.1		23.3	25.7	
Debt/Equity ^e	34.9	33.7		61.6	61.9	

^aIncludes incorporated U.S. energy companies which are foreign-affiliated and for which publicly reported financial information is available. Also included are foreign investor companies for which data for U.S. operations were not separately disclosed. For 1985 these companies were: Adobe Resources Corp., American Petrofina, Arabian Shield Development Co., Arapaho Petroleum Inc., Asamera Inc., Barret Resources Corp., Bengal Oil and Gas Corp., Bow Valley Industries Ltd., Campbell Resources Inc., Castle Energy Corp. (formerly Minden Oil and Gas), Chieftain Development Co. Ltd., DI Industries, Inc. (formerly, Drillers, Inc.), E.I. du Pont de Nemours and Company, Egret Energy Corp., Gulf Resources and Chemical Co., Hamilton Oil Corp., Harken Oil and Gas Inc., Inspiration Resources Corp., Inter-City Gas Corp., M.A. Hanna Co., MacMillan Ring-Free Oil Co., Newmont Mining Corp., North Canadian Oils Ltd., Oceanic Exploration Co., Petrotech Inc., Placer Dome, Inc. (formerly Placer Development Ltd.), Premier Resources Ltd., Pyro Energy Corp., Ranger Oil Ltd., Rio Algom Ltd., Schlumberger Ltd., Scurry-Rainbow Oil Ltd., Seagull Energy Corp., Shell Oil Co., Southland Energy Corp., Standard Oil Company, Sunshine Mining Co., Total Petroleum of North America, Triton Energy Corp., Unimar Co., United Canso Oil and Gas Ltd., Westmoreland Coal Co., and W.R. Grace and Company. In 1986, three additional companies are included, all of which were partly or wholly acquired by foreign entities during 1985. The additional companies are: Exploration Co., Panhandle Eastern Corp., and Woodbine Petroleum Inc. In 1986, W.R. Grace and Company reduced its foreign ownership to less than 10 percent. All data for the companies were derived from the Compustat II Industrial File except the data for Standard Oil Company which were obtained from annual reports to shareholders.

The comparison group is derived from aggregates available from the Compustat II Industrial File for the following four digit (SIC) industries: 1211 (bituminous coal and lignite mining), 1311 (crude petroleum and natural gas production), 1381 (oil and gas well drilling), 1382 (oil and gas field exploration), 1389 (oil and gas field services), and 2911 (petroleum refining). The Compustat aggregates are adjusted by subtracting out data for companies which have been identified as foreign-affiliated, or whose operations are foreign-based, or foreign-based companies whose U.S. operations are already included in U.S. companies identified as foreign-affiliated. The value of the financial items reported above for 1985 for the comparison group are lower than the values reported in the previous edition of this report due to reclassifications of companies to other industries.

^cMeasured as funds from operations.

^dDefined as net income divided by end-of-year stockholders' equity.

^eDefined as end-of-year long-term debt divided by end-of-year stockholders' equity.

NM = Not meaningful.

Source: Compiled from Compustat II Industrial File and company annual reports.

net income. Restructuring frequently results in charges against income, as assets on a company's books are written down to market prices. Three foreign-affiliated companies (Schlumberger Ltd, Standard Oil, and Panhandle Eastern) reported, in their annual reports to shareholders, writedowns and other unusual charges against income totaling \$2.9 billion in 1986. In 1985, Schlumberger and Standard Oil reported writedowns totaling \$1.6 billion.

Since most writedowns of asset values involved only book values and did not require any actual cash outlays, cash flow was not as severely affected by energy-market developments as was net income. Nevertheless, the decline in cash flow was substantial. For the foreign-affiliated energy companies, cash flow fell 20 percent between 1985 and 1986 while for the energy industry comparison group the comparable decline was 21 percent.

The decline in oil prices also had an adverse effect on capital outlays of energy companies. Foreign affiliates reduced their capital outlays by 32 percent and the energy industry comparison group reduced their capital outlays by 29 percent. For both groups, the reduction in capital outlays exceeded the reduction in cash flow.

Foreign Direct Investment Transactions in U.S. Energy Markets

This section presents a summary of equity acquisitions, mergers, joint ventures, lease acquisitions, and other transactions related to FDI activity in 1986. The transactions identified in this section were derived from a variety of public sources and do not necessarily reflect the confidential data submitted by foreign affiliates to the U.S. Department of Commerce, as reported in Chapter 2. However, the transactions reported in this section are drawn from the most accurate information that is publicly available and should describe broad trends and developments in the composition of FDI in U.S. energy.¹⁹

Over 90 percent of the value of 1986 transactions occurred in the petroleum industry (Table 17). The only other year that the share exceeded 90 percent was 1985. The largest transaction (\$290 million for a 50-percent ownership interest and \$250 million contribution to working capital) gained Petroleos de Venezuela half ownership of Southland Corporation's Citgo Petroleum subsidiary. Through this change in ownership structure, the national petroleum company of Venezuela obtained an assured outlet in the United States for its crude oil exports. A similar transaction in 1987 gained Petroleos a 50-percent share of the Champlin Petroleum

¹⁹The identified FDI-related transactions for 1986 are listed in Tables A1, A2, and A3 in the Appendix as are the information sources. Information for 1981 and 1982 FDI-related transactions is drawn from Appendix A of the U.S. Department of Energy, Secretary's Annual Report to Congress, DOE/S-0010(83) (Washington, DC, September 1983), and Appendix A of U.S. Department of Energy, Annual Report to Congress, DOE/S-0010(84) (Washington, DC, September 1984), respectively. The 1983 information appeared in Energy Information Administration, Profiles of Foreign Direct Investment in U.S. Energy 1983, DOE/EIA-0466 (Washington, DC, February 1985), 1984 information appeared in Energy Information Administration, Profiles of Foreign Direct Investment in U.S. Energy 1984, DOE/EIA-0466(84) (Washington, DC, December 1985), and 1985 information appeared in Energy Information Administration, Profiles of Foreign Direct Investment in U.S. Energy 1985, DOE/EIA-0466(85) (Washington, DC, January 1987).

It should be noted that because the information utilized in this section can come only from public sources, validation is not always possible. Nevertheless, the information presented in this section is useful for discerning broad trends in the composition of FDI-related transactions.

Table 17. Distribution of the Value of Foreign Direct Investment Transactions^a by Industry, 1981-1986
(Percent)

Industry	1981	1982	1983	1984	1985	1986
Petroleum	79.6	60.3	87.8	77.2	99.1	91.5
Coal	20.2	32.4	11.3	19.7	0.9	7.6
Other	0.2	7.3	1.0	3.1	0.0	0.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

^aExcludes transactions for which dollar values were not reported.

Note: Total may not equal sum of components due to independent rounding.

Sources: • 1986: the percent distribution is based on Appendix A. • 1981-1985: Energy Information Administration, Profiles of Foreign Direct Investment in U.S. Energy 1985, DOE/EIA-0466(85) (Washington, DC, January 1987).

(a subsidiary of Union Pacific) Corpus Christi refinery. The second largest transaction in 1986 (\$200 million in cash and common stock valued at \$330 million) was a negotiated settlement between Panhandle Eastern Corporation, a major natural gas transmission company, and Sonatrach, the Algerian national oil and gas company. In addition to the \$200 million in cash, Sonatrach received an 11.4 percent equity share of Panhandle Eastern.

Other petroleum transactions that exceeded \$100 million in value involved heightened activity in U.S. oil and gas production and exploration operations by foreign direct investors. Consistent with its emphasis on acquiring U.S. oil and gas reserves as an element of exploration and development strategy, Shell Oil acquired producing properties in California from Phillips Petroleum for \$225 million. In a joint venture involving the former chairman of Atlantic Richfield, Lonrho PLC, of the United Kingdom, purchased U.S. oil and gas reserves for \$180 million. Nippon Mining Company, of Japan, joined with Du Pont's Conoco unit in a joint drilling venture in the United States valued at \$135 million. Similar ventures between Japanese investors and Amoco and Texaco occurred subsequently in 1987.

As a share of the value of 1986 FDI-related transactions, coal operations rose from the near-zero level recorded in 1985 to nearly 8 percent in 1986. Du Pont's Conoco unit acquired properties from Inland Steel for \$106 million and acquired Sierra Coal Company for \$49 million.

In the uranium area, Taiwan Power Company and Rocky Mountain Energy undertook a joint venture valued at \$18 million.

The composition of the value of FDI-related transactions with respect to the type of transaction shifted somewhat between 1985 and 1986 (Table 18). Joint ventures were more prominent and asset acquisitions were of lesser importance. The shift stemmed from the joint ventures in upstream petroleum and uranium exploration initiated in 1986. The share for "other" types of transactions shown in Table 18 fell off in 1986 due to the unusually high level of expenditures for downstream petroleum asset acquisitions in the previous year.

Table 18. Distribution of the Value of Foreign Direct Investment Transactions^a by Type of Transaction, 1981-1986 (Percent)

Type of Transaction ^b	1981	1982	1983	1984	1985	1986
Stock/Equity Acquisition.....	74.1	58.2	16.9	61.5	49.1	57.6
Property or Lease Acquisition...	16.7	10.6	55.7	31.6	29.2	24.2
Joint Venture.....	9.2	10.2	4.1	0.9	0.3	16.3
Other.....	(^c)	21.0	23.4	6.0	21.4	1.9
Total.....	100.0	100.0	100.0	100.0	100.0	100.0

^aExcludes transactions for which dollar values were not reported.

^bStock/equity acquisitions: purchases of common stock and purchases of subsidiary companies of U.S. corporations. Property or lease acquisitions: purchase of producing energy properties and acquisitions of leases from Federal and state governments. Joint ventures: the value of a foreign entity's share in a joint venture in the United States. Other transactions consist of plant expansions, long-term supply contracts, and purchase of existing plant and equipment.

^cLess than 0.05 percent.

Note: Total may not equal sum of components due to independent rounding.

Sources: • 1986: the percent distribution is based on Tables A1, A2, and A3 in the Appendix.

• 1981-1985: Energy Information Administration, Profiles of Foreign Direct Investment in U.S. Energy 1985, DOE/EIA-0466(85) (Washington, DC, January 1987).

Appendix
Completed Foreign
Direct Investment
Transactions, 1986



*A workman aboard a production platform
checks the wind velocity*

Table A1. Completed Transactions by Size in the Petroleum Industry from January 1986 through December 1986

Acquiring Company	Acquiring Company Activity	Affected Company	Affected Company Activity	Type of Transaction	Size of Transaction (million dollars)	Date of Transaction
PETROLEOS DE VENEZUELA S.A. (Venezuela)	National Petroleum Company of Venezuela	Citgo Petroleum Corp. (Southland Corp., Dallas, TX)	Petroleum refining, marketing, and transportation	Equity acquisition	\$540	10-86
SONATRACH (Algeria)	National Oil and Gas Company of Algeria	Panhandle Eastern Corp., (Houston, TX)	Transmission/sale of natural gas	Equity acquisition	\$530	07-86
ROYAL DUTCH SHELL GROUP (Netherlands) Shell Oil Co.	Integrated petroleum operations	Oil and gas interests of Phillips Petroleum in California	Oil and gas exploration and production	Property acquisition	\$225	08-86
LONRHO PLC (London, England)	Holdings: mining copper/gold/platinum	Purchase of U.S. Oil Reserves from Atlantic Richfield	Oil and gas exploration and production	Joint venture	\$180	10-86
NIPPON MINING COMPANY (Japan)	Petroleum refining, petrochemicals, Nonferrous metals	Conoco, Inc. (DuPont)	Oil and gas exploration and development	Joint venture	\$135	09-86
TOTAL COMPAGNIE FRANCAISE DES PETROLES (France) Minatome Corp.	Integrated petroleum operations	Lear Petroleum Partners LP (TX)	Oil and gas exploration and development	Asset acquisition	\$115	10-86
TOTAL COMPAGNIE FRANCAISE DES PETROLES (France) Total Petroleum (North America) Ltd.	Integrated petroleum operations	AMR Energy Corp. (TX)	Oil and gas exploration and production	Asset acquisition	\$ 41	06-86
SARGENT HOLDING COMPANY (Austria)	Investments and holdings	Powerine Oil Co. (CA)	Refining	Asset acquisition	\$ 38	09-86
CHIEFTAIN DEVELOPMENT CO. LTD. (Canada) Chieftain International, Inc.	Oil and gas exploration and development	Interest in oil properties in southwestern U.S.	Oil and gas exploration and production	Equity acquisition	\$ 29	06-86
TOTAL COMPAGNIE FRANCAISE DES PETROLES (France) Total Petroleum (North America) Ltd.	Integrated petroleum operations	Interest of Forest Oil Corp. in Gomes, West Texas gas field (PA)	Oil and gas exploration and development	Asset acquisition	\$ 15	06-86
MOAGE, Ltd. (Sydney, Australia) Moage, Inc.	Oil and gas exploration and development	Woodbine Petroleum, Inc. (TX)	Oil and gas exploration and production	Equity acquisition	\$ 10	01-86
NISSHO IWAI CORP. (Osaka, Japan)	Investment and trading co.	Oil property owned jointly by the Mobil Oil Corp. and Armstrong Petroleum (CA)	Integrated petroleum operations	Equity acquisition	\$ 10	02-86
INDUSTRIAL ENGINEERING, LTD. (Victoria, Australia)	Investments and holdings	Triton Energy Corp. (TX)	Petroleum, mineral exploration and development	Equity acquisition	\$ 9.6	12-86
WESTERN EXPLORATION PTY LTD. (Australia)	Mining, holding co.	The Exploration Company (TX)	Oil, gas, mineral exploration and development	Equity acquisition	\$ 4.9	03-86
MSR EXPLORATION LTD. (Canada)	Oil and gas exploration and development	Georesources, Inc. (ND)	Oil exploration and development	Equity acquisition	\$ 1.0	03-86

Table A1. Completed Transactions by Size in the Petroleum Industry from January 1986 through December 1986 (Continued)

Acquiring Company	Acquiring Company Activity	Affected Company	Affected Company Activity	Type of Transaction	Size of Transaction (million dollars)	Date of Transaction
ANDREW ALAN DAVIS (Sydney, Australia)	Investor	Egret Energy Corp. (TX)	Oil drilling, field and exploration services	Equity acquisition	\$ 0.1	07-86
COGERE S.A. (Switzerland)	Investments and holdings	Grady Resources, Inc. (NV)	Oil and gas exploration and development	Equity acquisition	\$ 0.1	02-86
PETROFINA S.A. (Belgium) American Petrofina	Oil and gas exploration, production, refining and marketing	Oil and gas properties of Williams Exploration Co. in Louisiana, Texas and Colorado	Oil and gas exploration and development	Property acquisition	NA	12-86
MINERALS AND RESOURCES, LTD. (Bermuda) Adobe Resources Corp.	Holdings, mining, investment banking	Universal Resources, Corp. (TX)	Oil and gas exploration and development	Equity acquisition	NA	08-86
CLAREMONT PETROLEUM N.L. (Austria) Euroline Development, Ltd. (Cyprus)	Oil and gas exploration and development	Triton Energy Corp. (TX)	Petroleum, mineral exploration and development	Equity acquisition	NA	01-86
NATIONAL COAL BOARD STAFF SUPERANNUATION SCHEME TRUSTEES, LTD. (United Kingdom)	Pension fund	Triton Energy Corp. (TX)	Petroleum, mineral exploration and development	Equity acquisition	NA	12-86
BRITISH PETROLEUM CO., PLC (United Kingdom) Sohio Petroleum Co.	Integrated petroleum operations	Three newly discovered wells in Prudhoe Bay, Alaska	Oil and gas production	Equity acquisition	NA	01-86
ROYAL DUTCH/SHELL GROUP (Netherlands) Shell Offshore, Inc.	Integrated petroleum operations	Interest in a newly discovered well in Alabama	Oil and gas production	Equity acquisition	NA	05-86
ROYAL DUTCH/SHELL GROUP (Netherlands) Shell Western Exploration and Production, Inc.	Integrated petroleum operations	Oil and gas interest of Reading and Bates Corp. (OK)	Drilling wells, oil and gas exploration and development	Asset acquisition	NA	12-86
ROYAL DUTCH/SHELL GROUP (Netherlands) Shell Oil Co.	Integrated petroleum operations	Interest in oil and gas leases in Gulf of Mexico, Louisiana	Oil and gas production	Lease acquisition	NA	06-86
MOONIE OIL CO. (Australia)	Oil exploration, transportation	Avalon Corp. (NY)	Oil and gas exploration, real estate	Equity acquisition	NA	01-86
WINTERSHALL AG (West Germany) Wintershall Corp.	Oil and gas exploration and development, refining	U.S. oil and gas assets of International Minerals and Chemical Corp.	Oil and gas production and transmission	Asset acquisition	NA	11-86
CORTEZ INTERNATIONAL LTD. (Canada)	Oil and gas related services	Oil and gas assets Of Brickland Corp. (CO)	Oil and gas exploration and development	Asset acquisition	NA	10-86

NA: Not available.

Note: Transactions include acquisition of equity, acquisition of properties, joint ventures, and other combined activities. Dates of transaction may reflect a publication date rather than an actual transaction date.

Sources: See last page of the Appendix.

Table A2. Completed Transactions by Size in the Coal Industry from January 1986 through December 1986

Acquiring Company	Acquiring Company Activity	Affected Company	Affected Company Activity	Type of Transaction	Size of Transaction (million dollars)	Date of Transaction
SEAGRAM CO. LTD. (Canada) DUPONT (Consolidation Coal Co.)	Investments and holdings	Inland Steel Co. (IL)	Coal mining	Property acquisition	\$106	12-86
SEAGRAM CO. LTD. (Canada) DUPONT (Consolidation Coal Co.)	Investments and holdings	Sierra Coal Co. (KY)	Coal mining	Equity acquisition	\$49	12-86
PRINCE KHALED IBN (Saudi Arabia) Arabian Shield Development Co.	Investor	Dorchester Coal Co. (CO)	Coal mining	Equity acquisition	NA	02-86

NA: Not available.
Sources: See last page of the Appendix.

Table A3. Completed Transactions in the Uranium Industry from January 1986 through December 1986

Acquiring Company	Acquiring Company Activity	Affected Company	Affected Company Activity	Type of Transaction	Size of Transaction (million dollars)	Date of Transaction
TAIWAN POWER CO. (Taiwan)	Electric power production	Rocky Mountain Energy (CO)	Uranium exploration	Joint venture	18.0	08-86

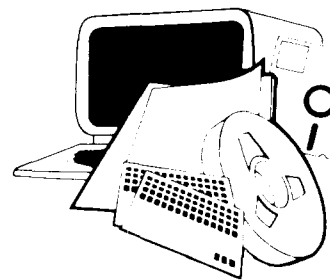
Sources: See last page of the Appendix.

Sources

Sources used in compiling the information presented in Tables A1, A2, and A3 include:

- The Acquisition/Divestiture Weekly Report. Quality Services Co. Santa Barbara, CA. 1986 and various issues for 1987.
- Business Week. Various issues.
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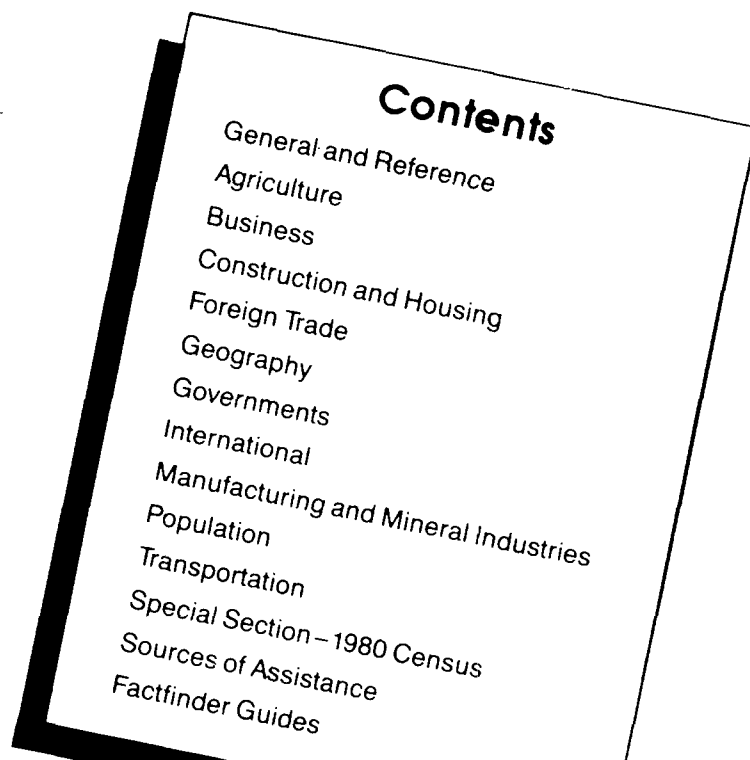
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